

the characteristic type of larva and mode of pupation, but before the assumption on the part of the imago of the equally characteristic features (venation, spurless tibiæ *) exhibited by the more specialized types of the family; so that, in the present state of our knowledge, the only logical place for the genus is at the beginning of the Stratiomyidæ †.

BIBLIOGRAPHICAL NOTICES.

The Study of Man. By ALFRED C. HADDON. 8vo. Pages xxxi and 512. With 49 Woodcuts and 8 Plates. Bliss and Co., London; Putnam and Sons, New York. 1898.

THIS comprehensive work on Anthropology, descriptive and illustrated, is a good introduction to that science, by Professor Haddon, D.Sc. &c., and is one of the "Progressive Science Series." The several subject-matters are treated as far as possible in a popular manner.

* The anterior tibiæ in *Xylomyia* are always devoid of the apical spurs, with which the middle and posterior tibiæ are normally armed; in certain exotic species, however, there appears to be a tendency towards the disappearance of the spurs on the posterior tibiæ also, for in a species (at present undetermined) from Ceylon, collected and presented by Lt.-Col. Yerbury, the spurs on the hind tibiæ are very small, while in *Xylomyia* (*Solva*) *hybotoides*, Walk., from Gilolo, they are apparently absent altogether.

† Lest it should be thought that, after what had previously been written by Osten Sacken and by Brauer, it was unnecessary to say anything further as to the question of the true systematic position of the genus *Xylomyia*, I may perhaps be permitted to point out that the conclusions of the authors in question appear to be ignored by recent writers and catalogue-makers. Verrall, as already stated, in his 'List of British Diptera' (1888), placed *Xylomyia* among the Xylophagidæ, and his example is followed by van der Wulp in the two recently published catalogues of Diptera from South Asia and the Netherlands referred to above. Lastly, Williston, in his 'Manual of the Families and Genera of North American Diptera' (1896), p. 43, boldly places *Xylomyia* (the extraordinary misprint *Subula Omyia*, which represents the genus on the page referred to, is noted in the "Corrigenda" on p. iv, where Rondani's designation is substituted) among the Leptidæ, uniting it with the American genera *Glutops*, Burgess, and *Arthroceras*, Williston, to form the subfamily Arthroceratinæ. Unfortunately I cannot claim personal acquaintance with either of these genera, but (as is evident from the statements of their authors) they are so different from *Xylomyia* in general habitus—not to mention the fact that in them the marginal vein encompasses the entire border of the wing—that it is difficult to understand how anyone could place *Xylomyia* in the same subfamily. Williston, however, appears to think that in *Xylomyia* also the marginal vein runs right round the wing (cf. 'Entomologica Americana,' vol. i. (1885-86) p. 115), whereas as a matter of fact it stops short at the third vein, or at any rate does not extend beyond the second vein which issues from the discal cell.

On the whole, therefore, it seemed worth while to utilize this opportunity for once more drawing attention to the facts: that a genus should have been assigned to three families by contemporary writers is scarcely creditable to the present condition of dipterology.

Whether dealing with civilized or with savage life, and with the many representatives of various kinds and conditions of men in different stages of culture, it is desirable to know how and why the several people either agree or disagree one with another in their habits of life and modes of thought. It is then possible to meet them in their friendly advances with some satisfaction, or, if in unfriendly aspects, without mutual harm. So in a siege, a knowledge of the structure and bearings of a fortress enables the approach to be made with precision and advantage.

To characterize one man in a family, or a particular family in a tribe, or a tribe in a nation, or one nation as distinct from another, it is necessary to have a clear knowledge of the bodily features and the mental peculiarities of the individual and of the community, whether limited or numerous.

The method of discriminating the individual and national characters of past and present peoples can be carried out by definitely noting the measurements and proportions of the limbs, the shape and size of the skull, including face, nose, and ears; also the colour of eyes and hair. How these points can be usefully considered and brought to bear on the determination, discrimination, and classification of individuals and of national groups, the interesting book before us is designed to illustrate. The several physical characters and features alluded to above are dealt with in detail, beginning with the importance of measurements, particularly of the head, arm, hand, fingers, ears, and nose, in the identification of criminals.

To recognize the nature and relationship of bygone peoples—whether prehistoric, primæval, and possibly almost primitive, such as those who had nothing but stone for tools and weapons, or the bronze-workers, or those who used iron—we must look for some characters in their implements, in their skulls and other bones, and the relics of the animals associated with them in their caves and rock-shelters. Further, the drawings and carvings on the walls of their cave-dwellings, and in the more elaborate tombs, give useful indications of their doings and of others living with them as slaves or otherwise. Their heaps of refuse, their mounds of sepulture and perhaps of religious meaning, are also witnesses of their life and death, their habits, intentions, and aspirations.

In the early chapters of this volume the ancient Egyptians, Assyrians, Babylonians, and Lybians, as well as the old and the modern Jews, the British, French, and some other European peoples, are all shown to yield evidences of racial and other relationships when studied as to structural details and habits of life.

Previous, however, to the monumental and documentary evidences of Chaldæa and Egypt, many widespread peoples had left distinct traces of their whereabouts, their doings, and their sentiments.

The systematic study of Man and Mankind, now known as the science of Anthropology, is closely associated, on the one hand, with Archæology, which leans on Geology for the explanation of some of its most important problems, and, on the other hand, when directed to the elucidation of the natural grouping, origins, and migrations of tribes or nations, it becomes Ethnology and Ethnography, com-

prising Sociology, Technology, Religion, Linguistics, and Folk-lore. Physical and experimental Anthropology, or Somatology, treats of the nature and structure of the body, anatomically and physiologically.

By means of Anthropology we recognize a very high antiquity of the human race, its wide extension in early times, and the successive evolution of better types along certain lines, with varied stages of culture, in their rise, maturation, and decadence.

Chapter V. illustrates the plan, details, and conclusions of an ethnographic study of the inhabitants of a certain district, namely, a part of West-Central and South-west France, comprising the five Departments of Dordogne, Charente, Corrèze, Creuse, and Haute Vienne. These notes are based on the data published by Dr. Collignon in 1894 and 1895. Statistics and diagram-maps illustrate the local distribution of special characters of the cranium, colour of hair and eyes, and the stature.

Under the technical terms of brachycephalic and dolichocephalic (as determined from the relative length, breadth, and height of the skull), the inhabitants of this region are found to represent, on the one hand, (1) short and dark, or (2) tall and fair brachycephals, and, on the other hand, (3) fair and tall, or (4) dark dolichocephals. Attention is drawn to the relationship of these several races and their varieties to the ancient peoples of Europe and the Mediterranean borders, and to the prehistoric folk or cave-men, of whom there are abundant remains in Dordogne. Evidences of the persistence of some of these races to the present day are traceable in the peasantry of certain cantons.

Some generalizations respecting the succession of races as inhabitants of this part of Western Europe are given in brief at pages 155-160. Scattered examples of a type probably related to the Man of the older stone-age have been observed. Early neolithic Man, inhabiting some of the caves, was probably the same as those known as the brown dolichocephals or Iberians. Short dark brachycephals came into the French region, probably by two routes, from the East in Neolithic times. Afterwards, as generally known, the fair dolichocephals ("Kymri, Gauls, Cimbrians, Burgundians, Visigoths, Franks, &c.") came from the north or north-east, first into the plains of North Germany, thence to what are now the Netherlands and Flanders. Divided by the Central Plateau of France, one branch streamed away into Italy, and the other into Spain, and thence to North Africa.

Under the heading of Technology or practical Ethnography, dealing with the history of tools and other manufactured objects, the author takes, as a familiar illustration of the gradual progress and practical working out of ideas in adaptation to circumstances, the history of the cart or wheeled vehicle, from its beginning as two parallel sloping poles, without wheels or any receptacle for goods—a condition not long since existing in Ireland and at present among American Indians when shifting their wigwams.

There are careful notices of the persistence of special toys and

games among children of many races, in unconscious continuation of the early use of certain weapons and kinds of warfare, or of manual work, of superstitions, and of gambling.

Much is collected in these chapters about the scratch-cradle and its meanings, about kites, tops, and tug-of-war game, and especially about the whirring, whizzing, buzzing, booming, perforated stick, whirled violently around with a string. This (known as the "Bull-roarer") is recognized as the ancient widespread ceremonial implement, once awing the superstitious, and still important in the hands of the conductors of the rites of Initiation in Australia. Children's singing-games are mainly concerned with courtship, marriage, funeral rites, and belief in ghosts, evidently (though distantly) representing ancient customs and lines of thought, in some cases still surviving in full force among savages and, in feebler fashion, among civilized communities.

Chapter XVI., pages 434-467, reprints the "practical suggestions for conducting ethnographical investigations in the British Islands," and includes at pages 467-489 "Instructions for the Collection of Folk-lore," an important branch of the science.

Appendix A consists of Dr. D. G. Brinton's comprehensive and very useful Classification and International Nomenclature of the Anthropological Sciences, namely:—(1) Somatology, (2) Ethnology, (3) Ethnography, (4) Archæology, and their subdivisions. A careful Index completes this well-considered and welcome addition to the library of both the experienced scientist and of the general reader who wishes to enlarge his knowledge, feeling assured that a careful systematic study of Mankind is a good and proper object for the cultivated intellect of Man.

Trouessart's Catalogue of Mammals.

Catalogus Mammalium, tam viventium quam fossilium. By E. L. TROUËSSART. Parts IV. and V., containing the Orders Tillodontia, Ungulata, Sirenia, Cetacea, Edentata, Marsupialia, and Monotremata. Berlin: Friedländer and Son, 1898.

WITH the exception of the Addenda and Index Dr. Trouessart has now completed his stupendous task; and all naturalists owe him a debt of gratitude, the extent of which it is almost impossible to express in words. Till he had this work to refer to, it was in many cases a matter of extreme difficulty for the zoologist or palæontologist to discover how many species (whether valid or nominal) of a particular group had been named; but for the future all is comparatively plain sailing.

That the work has faults is, as we have pointed out in previous notices, from the nature of the case, inevitable; but the marvel is that these faults and omissions are so few and far between. To have enabled him to complete his labour Dr. Trouessart must possess patience and industry far above the average, while he has also the technical knowledge of his subject which raises his work to